

**TABLE A-21**

QC Acceptance Criteria for Method RSK-175 — Methane/Ethane/Ethene

<b>RL - Methane = 0.5 ug/L</b>
<b>RL - Ethane = 0.7 ug/L</b>
<b>RL - Ethene = 0.7 ug/L</b>
<b>Accuracy Water (% R) = 80 - 120</b>
<b>Precision Water (RPD) = ±20</b>

<b>QC Check</b>	<b>Minimum Frequency</b>	<b>Acceptance Criteria</b>	<b>Corrective Action <sup>a</sup></b>	<b>Flagging Criteria <sup>b</sup></b>
Seven-point initial calibration for RSK-114/175	Initial calibration prior to sample analysis	Coefficient of correlation Greater than or equal to 0.995	Correct problem then repeat initial calibration	Apply R to all results for specific analyte(s) for all samples associated with the calibration
Continuing calibration verification	After initial calibration and before sample analysis	All analytes recovered within ± 20% of expected concentration.	Correct problem then repeat initial calibration	Apply J to positive results and UJ to non-detects for all results for specific analyte(s) for all samples associated with the calibration
Demonstrate ability to generate acceptable accuracy and precision using four replicate analyses of a QC check sample	Once per analyst	QC acceptance criteria, Table	Recalculate results; locate and fix problem with system and then rerun demonstration for those analytes that did not meet criteria	Apply R to all results for all samples analyzed by the analyst
Method (purge) blank	One per analytical batch	No MEE detected > RL	Correct problem then reprep and analyze method blank and all samples processed with the contaminated blank	Apply U to all results for the specific analyte in all samples in the associated analytical batch whose concentration is less than 5 times the blank concentration.
LCS for MEE	One LCS per analytical batch	QC acceptance criteria 80-120% recovery.	Correct problem then reprep and analyze the LCS and all samples in the affected analytical batch	For specific analyte in all samples in the associated analytical batch: if the LCS %R > UCL, apply J to all positive results if the LCS %R < LCL, apply J to all positive results, apply UJ to non-detects. If LCS <10%, R flag results.
Duplicate	One duplicate per 40 samples.	QC acceptance criteria in this table.	None	Flagging to be based on site information and reviewer's judgement. Recommended flags are J for positive results and UJ for non-detects.
MDL study	Once per year	Detection limits established shall be < the RLs .	None	None
Results reported between MDL and RL.	None	None	None	Apply J to all results between MDL and RL

<sup>a</sup> All corrective actions associated with AFCEE project work shall be documented, and all records shall be maintained by the laboratory.

<sup>b</sup> Flagging criteria are applied when acceptance criteria were not met and corrective action was not successful or corrective action was not performed.

RL footnote—RL depends on the volume of headspace generated. RLs are typical estimates.